

ABSTRACT

Methods and systems for providing cleaning and providing barrier coatings to interior wall surfaces of small diameter metal and composite piping systems in buildings. An entire piping system can be cleaned in one single pass by dry particulates forced by air throughout the building piping system by an external generator, and the entire piping system can be coated in one single pass by a machine also connected exterior to the piping system. Small diameter pipes can be protected by the effects of water corrosion, erosion and electrolysis, extending the life of small diameter piping systems such as copper, steel, lead, brass, cast iron piping and piping systems made of composite materials. The invention meets the National Sanitation Foundation standard for products and services that come into contact with potable water, and the American Water Works Association. Coatings can be applied to pipes having diameters of approximately 3/8" up to approximately 6" so that entire piping systems such as potable water lines, natural gas lines, HVAC piping systems, drain lines, and fire sprinkler systems in buildings such as single-family homes to smaller walk-up style apartments to multi-floor concrete high-rise hotel/resort facilities and office towers, as well as high-rise apartment and condominium buildings and schools, can be cleaned and coated to pipes within existing walls. The barrier coating forms an approximately 4 mils or greater covering to the inside of pipes. Entire buildings can return to service within approximately 24 to approximately 96 hours depending on the size of the building piping system.